UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
TUCKER, WESLEY J

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 11/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2000*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.
    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)

3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2 and 3* .   6)☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 4-12, and 14-17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over the combination of U.S. Patent 6,445,819 to Kinjo and U.S. Patent

6,278,491 to Wang et al.

With regard to claim 1, Kinjo discloses an image enhancement system,

comprising memory for storing digital data that defines a graphical image (Fig.1,

element 48) and a face detector configured to analyze said digital data and to

automatically identify facial data within said digital data stored in said memory (Fig.2,

element 100).

Kinjo discloses an image enhancer, but does not disclose automatically identifying

a portion of said facial data that defines a particular facial feature and automatically

enhancing an appearance of said facial feature within said graphical image.

Wang discloses an image enhancer configured to automatically detect and reduce

red-eye in a digital image (Fig 2 and column 4, lines 25-44). Wang's red-eye example is

just one example of detecting and augmenting a facial feature in a digital image. Kinjo

makes reference to red-eye correction (column 20, lines 42-45). Kinjo does not

enhance the facial feature within the image automatically. Once a face has been

detected in a digital image, several different processes are used to change portions of

that image in order to enhance the appearance of that image. Therefore it would have

been obvious to one of ordinary skill in the art at the time of invention to employ Wang's

system to modify all or part of the facial image detected in order enhance the

appearance of that image.

With regard to claim 2, Kinjo and Wang disclose input devices configured to receive

an input. Kinjo discloses a scanner (Fig.1, element 12). Wang discloses a facial

detector, an eye detector, and a pupil detector (Fig. 2). Each detector relies on input

from the detector before to select a facial feature. Wang's image enhancer is further

configured to select said facial feature based on its input (Fig. 2). In the combination of

Kinjo and Wang, Wang's image enhancer would operate on the input received by

Kinjo's input device. The red-eye reduction occurs according to the input from the face

locator and eye locator. The portion of the image to be modified or the facial feature

selected is based on these inputs.

With regard to claim 3, Kinjo discloses said image enhancer to process color

correction, but does not specifically refer to color blending. Wang discloses said image

enhancer to manipulate portions of an image by blending color values associated with

said portion (column 8, lines 4-10). Here a process is described where adjacent pixels

to the red pupil region are changed to make the red-eye appear more natural by

blending the colors. Blending colors in this way would make the difference in color less

noticeable in a situation such as red-eye removal and therefore make the overall image

more appealing. Therefore it would have been obvious to one of ordinary skill in the art

to blend colors in order to make the difference in color less noticeable and to make the

overall appearance of the image more appealing.

With regard to claim 5, Kinjo discloses said image enhancer, wherein manipulating

said portion, sharpens said appearance of said facial feature (column 10, lines 65-67).

With regard to claim 6, Kinjo discloses said image enhancer, wherein manipulating

said portion, changes a color of said facial feature (column 10, lines 60-65).

With regard to claim 7, Kinjo discloses said system including an image capturing

device configured to receive an image of a scene and to produce said digital data based

on said image received by said image capturing device (Fig.1, element 12). In this

embodiment the image capture device is a scanner.

With regard to claim 8, Kinjo discloses said image capturing device including a lens

for receiving said image and an image converter for producing said digital data based

on said image (Fig. 1, elements 12, 28, and 32). The scanner contains a CCD with lens

(28) and analog to digital converter (32).

With regard to claim 9, the combination of Kinjo and Wang applies as discussed

in regard to claim 1. Claim 9 repeats the exact elements of claim1 with the addition of

claiming means. The means have already been disclosed.

With regard to claim 10, the combination of Kinjo and Wang applies as discussed

in regard to claim 1. Claim 1 cites all of the elements of claim 10 and differs only by the

reference to a method by claim 10. The method used with the system is considered to

be included in the system. Claims 11-17 also repeat the elements in claims 2-8 with

reference to a method. With regard to depending claims 11-17, refer to claims 2-8

respectively.

Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the

combination of Wang and Kinjo in view of U.S. Patent 5,835,616 to Lobo.

With regard to claim 4, Kinjo discloses said image enhancer, wherein manipulating

said portion, applies various image processing techniques. Neither Kinjo nor Wang

disclose blurring the appearance of the facial feature. Lobo discloses enhancing a

facial image by blurring the image (Abstract). Lobo teaches that the blurring filter is

used to better set forth the facial features of the image (Abstract). Blurring is a well-

known image enhancing technique. Therefore it would have been obvious to one of

ordinary skill in the art at the time of invention to add blurring to the list of available facial

feature enhancing techniques listed by Kinjo in order to better set forth the facial

features of the image.

With regard to claim 13, the discussion of claim 4 applies. The method used in

the system is considered to be included in the system.

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

U.S. Patent 6,160,923 to Lawton et al. describes a user directed image

enhancement system that can be used to enhance portions of a digital image such as a

human face.

U.S. Patent 6,108,437 to Lin describes a face recognition apparatus capable of

extracting at least two facial features.

U.S. Patent 5,978,100 to Kinjo describes a method of determining a principal

portion of an image such as a face and enhancing that portion for reproduction.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Wes Tucker whose telephone number is 703-305-6700.

The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for

the organization where this application or proceeding is assigned is (703)308-5397.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703)305-

3900.

Wes Tucker
11-17-2003

Jon Chang
Primary Examiner